



# *Science, Society, and America's Nuclear Waste*

Transparency Masters &

# *Student Activities*

Nuclear Waste Challenges & Solutions

Ordering of Perceived Risk

Factors for Locating Hazards

Overview – Nuclear Waste Policy Act

Swimming Pool Construction Flow Chart

Nuclear Waste Challenges and Solutions (Activity)

Risk

Risk Perception Computer Activity

Probability: The Language of Risk Assessment

Factors Affecting Risk Judgments

Location of Hazards

Probability Exercises

Metric & U.S. Unit Conversions

# *The Nuclear Waste Policy Act*

Unit 3 Second Edition  
Teacher Guide

# NUCLEAR WASTE CHALLENGES AND SOLUTIONS

## PART I

Managing the Nation's nuclear waste is a complicated challenge with both technical and societal aspects that must be addressed. After reading the Overview – Nuclear Waste Policy Act, consider the statements written below and decide if each statement is a challenge or a solution (or both) and if it is societal or technical (or both). For each statement, put a check in the appropriate box or boxes.

	Challenge?	Solution?	Technical?	Societal?
1. There is an accumulation of spent fuel and high-level waste that requires permanent disposal.				
2. The Nuclear Waste Policy Act of 1982 (NWP) and the Nuclear Waste Policy Amendments Act of 1987 established a national policy for safely storing, transporting, and disposing of spent nuclear fuel and high-level waste.				
3. The NWP requires utilities using nuclear reactors for generating electricity to pay a fee that covers their share of all costs of disposal of spent fuel. Also, the Federal Government is required to pay costs of disposing of high-level waste that results from defense activities.				
4. Radioactive waste is a potential hazard to public health and safety and the environment.				
5. State and local governments and the public will participate in planning for disposal of waste.				
6. Spent fuel and high-level waste must be safely transported to the repository				
7. The Federal Government is planning a deep underground geologic repository for permanent disposal of spent fuel and high-level waste.				
8. Spent fuel and high-level waste will remain radioactive for thousands of years.				
9. The Federal Government will assist utilities in providing storage of spent fuel until a repository is ready.				
10. Spent fuel and high-level radioactive waste is thermally hot.				
11. In the Amendments Act, Congress directed DOE to conduct site characterization studies at Yucca Mountain, Nevada, for purposes of determining its suitability as a site for a geologic repository.				
12. Many Nevada residents are opposed to a geologic repository being constructed in their State.				